REMARKS

Entry of the foregoing and further and favorable consideration of the subject application are respectfully requested.

As correctly stated in the Official Action, Claims 10-20, 25-31, and 79-120 are pending in the present application. Claims 10-20, 25-31, 86, 100, and 112 stand withdrawn from consideration. Claims 79-85, 87-99, 101-11, and 113-120 stand rejected.

By the present amendment, Claims 81, 84, 93, and 96 have been canceled without prejudice to or disclaimer of the subject matter recited therein.

Claim 79 has been amended. Support for this amendment is derived from, at least, Claim 79 as originally presented and the support cited therefor. Claim 80 has been amended to incorporate the subject matter of Claim 81. Claim 82 has been amended to depend from Claim 80, rather than 81, which has been canceled. Claim 83 has been amended to incorporate the subject matter of Claim 84. Claim 85 has been amended to depend from Claim 83, rather than 84, which has been canceled. Claim 88 has been amended to recite "for" in place of "allowing." Claim 89 has been amended to recite that the dysplasia or cancer is "caused by a papillomavirus." Support for this amendment is found, at least, on page 3, lines 24-29 of the specification. Claim 90 has been amended. Support for the amendment to Claim 90 can be found, at least, in Claim 90 as originally presented and the support cited therefor. Claim 92 has been amended to incorporate the subject matter of Claim 93. Claim 94 has been amended to depend from Claim 92, rather than Claim 93, which has been canceled. Claim 95 has been amended to incorporate the subject matter of Claim 96. Claim 97 has been amended to depend from Claim 95, rather

than Claim 96, which has been canceled. Claim 104 has been amended to recite "for" rather than "allowing." Claims 105 and 107 have been amended to recite that the cancer or dysplasia is "caused by a papillomavirus." Support for this amendment is found, at least, on page 3, lines 24-29 of the specification. Claim 108 has been amended. Support for the amendment to Claim 108 can be found in Claim 108 as originally presented and the support cited therefor. Claim 109 has been amended to recite certain E6 and E7 variants. Support for this amendment can be found, at least, on page 18, line 28 to page 19, line 12 of the specification. Claim 116 has been amended to recite "for" rather than "allowing." Claims 117 and 118 have been amended to recite that the cancer or dysplasia is "caused by a papillomavirus." Claims 108 and 117-120 have been amended to delete the recitation of "prevention." Accordingly, no new matter has been added.

Applicants expressly reserve the right to pursue in one or more continuation or divisional applications any and all subject matter canceled by the present amendment.

Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 79-85, 87-99, 101-111, and 113-120 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite.

A. Claims 79-85, 87-99, 101-111, and 113-120 stand rejected as allegedly indefinite as to the components of the compositions. Without conceding to the merits of this rejection and solely in an effort to expedite prosecution, independent Claims 79, 91,

and 108 have been amended to recite "consisting essentially of" rather than "comprising." Accordingly, withdrawal of this rejection is respectfully requested.

B. Claims 79, 91, and 108 stand rejected as allegedly indefinite as an "intended" use is recited. Without conceding to the merits of this rejection and solely in an effort to expedite prosecution, Claims 79, 91, and 108 have been amended to delete the term "intended." Accordingly, withdrawal of this rejection is respectfully requested.

C. Claims 80, 83, 92, 95, and 109 stand rejected as allegedly indefinite as unclear what is intended by non-oncogenic variants of E6 and/or E7. Without conceding to the merits of this rejection and solely in an effort to expedite prosecution, Claims 80, 83, 92, 95, and 109 have been amended to recite specific non-oncogenic variants disclosed in the specification. Applicants respectfully submit that, based on the disclosure of the specification and the knowledge in the art, one skilled in the art would readily understand that the specific non-oncogenic variants claimed lack the ability to induce and maintain oncogenic transformation. See, *e.g.*, page 1, lines 25-27 of the specification. Accordingly, withdrawal of this rejection is respectfully requested.

D. Claims 88, 104, and 116 stand rejected as allegedly indefinite in the recitation of a carrier "allowing" administration of a composition. Without conceding to the merits of this rejection and solely in an effort to expedite prosecution, Claims 88, 104, and 116

have been amended to recite "for," rather than "allowing." Accordingly, withdrawal of this rejection is respectfully requested.

Rejections Under 35 U.S.C. § 112, First Paragraph

A. Claims 80, 83, 92, 95, and 109 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly lacking written description. The Examiner argues that the specification does not teach structural elements of E6 and E7 variants. The Examiner asserts that the claims embrace a much wider variety of possible variants than the single species of each shown. Without conceding to the merits of this rejection and solely in an effort to expedite prosecution, Claims 80, 83, 92, 95, and 109 have been amended to recite particular species of the E6 and E7 variants disclosed in the specification. Accordingly, withdrawal of this rejection is respectfully requested.

B. Claims 89, 105, 107, 117, and 118 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly lacking not enabled. The Examiner asserts that the specification is enabling for treating or preventing cervical dysplasias or cancers caused by papillomavirus, but not of non-papillomavirus-associated cancers or dysplasias. Without conceding to the merits of this rejection and solely in an effort to expedite prosecution, Claims 89, 105, 107, 117, and 118 have been amended to recite that the cancer or dysplasia is caused by a papillomavirus. Accordingly, withdrawal of this rejection is respectfully requested.

C. Claims 108-120 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly not enabled. The Examiner asserts that the specification supports the enablement of the treatment of papillomavirus infections but not the prevention of such infections. Without conceding to the merits of this rejection and solely in an effort to expedite prosecution, Claims 108 and 117-120 have been amended to delete the recitation of "prevention." Accordingly, withdrawal of this rejection is respectfully requested.

Rejections Under 35 U.S.C. § 102

Claims 79, 82, and 87-90 stand rejected under 35 U.S.C. § 102(e) as purportedly anticipated by Stanley *et al.* (U.S. Patent No. 6,096,869). The Examiner asserts that Stanley *et al.* disclose a pharmaceutical composition comprising IL-12 and at least one papillomavirus protein to treat papillomavirus infections and neoplasia. The Examiner argues that the open language "comprising" in the present claims renders the claim open to the possibility of possessing additional ingredients, such as IL-12. This rejection, to the extent that it applies to these claims as amended, is respectfully traversed.

Initially, Applicants note that independent Claim 79 has been amended to recite "consisting essentially of" a combination of papillomavirus polypeptides rather than "comprising."

Applicants respectfully submit that Stanley *et al.* disclose that IL-12 is present in 100% of regressing HPV-induced tumors surveyed in a clinical study, unlike many other cytokines also surveyed. (Col. 2, lines 48-51). Given the association between the presence of IL-12 in lesions resulting from HPV infection and regression of these lesions,

Stanley *et al.* propose to use IL-12 as a therapeutic agent in the treatment of papilloma-associated lesions. In addition, the IL-12 treatment can be used in combination with one or more papillomavirus antigen(s) for use as a vaccine. As indicated in Col. 3, lines 53-57, the combination composition can comprise at least one papillomavirus polypeptide or a substantial part thereof selected from E1, E2, E4, E5, E6, E7, L1, and/or L2 of HPV 6, 11, 16, and/or 18, which in total represents more than 80 possible combinations. Stanley *et al.* do not consider injecting papillomavirus polypeptides in the absence of IL-12 to treat or prevent papillomavirus-induced lesions or tumors.

The Examiner asserts that it cannot be determined from the claim language what is intended to be encompassed by the instantly claimed composition. As noted above, independent Claim 79 now recites "consisting essentially of" a combination of the papillomavirus polypeptides, which excludes the possibility of the additional active ingredient of Stanley *et al.* of IL-12. Accordingly, Stanley *et al.* do not anticipate the presently claimed invention. Withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. § 103

A. Claims 91, 98, 99, 101-108, 110, and 115-120 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Stanley *et al.*, Galloway (*Infect. Agents & Disease* 3:187-193 (1994)), Hines *et al.* (*Obstet. & Gynecol.* 86(5):860-866 (1995), and Gajewski (*J. Immunol.* 156:465-472 (1996)). The Examiner asserts that Hines *et al.* establish that a cytokine, *i.e.*, IL-2, activates cytotoxic T cells and that Stanley *et* al. further discloses the importance of administering a cytokine to stimulate T cells in order to reduce HPV-induced

tumors. The Examiner argues that one skilled in the art would have been motivated to combine the Galloway, Hines *et al.* and Gajewski publications with the disclosure of Stanley et al. to create a prophylactic and treatment vaccine representing the major antigens of the papillomavirus and with enhanced ability to stimulate T cells with IL-2 and B7.1. This rejection, to the extent it applies to the claims as amended, is respectfully traversed.

In order to establish a case of *prima facie* obviousness, three basic criteria must be met: (1) there must be some suggestion or motivation to modify the reference or combine reference teachings, (2) there must be a reasonable expectation of success, and (3) the prior art reference(s) must teach or suggest all of the claim limitations. *See* M.P.E.P. §2142. Applicants respectfully submit that these criteria have not been met in the present Office Action.

As noted above, Stanley *et al.* disclose the combination of IL-12 and one or more papillomavirus polypeptides. The presently claimed invention reflects Applicants' discovery that by administering a combination of (i) an immunostimulatory polypeptide selected from the group consisting of IL-2, IL-7, the co-adhesion molecule B7.1, and the co-adhesion molecule B7.2 and (ii) specified papillomavirus polypeptides, the growth of HPV-induced tumoral lesions may be inhibited. Stanley *et al.* do not teach or suggest such a combination. On the contrary, Stanley *et al.* teach away from a combination involving non-IL-12 immunostimulatory polypeptides.

The Examiner asserts that Stanley *et al.* disclose IL-12 and its biological role as a cytotoxic lymphocyte maturation factor and argues, thus, that Stanley *et al.* disclose the importance of administering a cytokine to stimulate T cells in order to reduce HPV-induced

tumors. Applicants respectfully submit that the Examiner has incorrectly broadened the disclose of Stanley *et al.* to encompass the possibility of using any cytokine in the treatment of papillomavirus-associated conditions. There are no concrete examples and no suggestion in the Stanley *et al.* disclosure that non-IL-12 cytokines would achieve a similar effect. On the contrary, Stanley *et al.* recognize that non-IL-12 cytokines do not play any role in the regression of HPV-induced tumors as indicated at Col. 2, lines 48-51: "The present invention arises from a surprising finding that IL-12 is present in 100% of regressing HPV-induced tumors surveyed by the present inventors in a clinical study - unlike many other cytokines also surveyed." Moreover, the experimental data clearly establish that IL-2 expression is quite different from IL-12 expression in the different categories of cervical biopsies analyzed in the study. Indeed, in marked contrast to IL-12, IL-2 transcripts are detected in normal cervix (table e), as well as in some of the non-regressing lesions (5/8 in table c, 2/7 in table b).

Therefore, Applicants submit that the Stanley *et al.* publication is not entitled to a presumption of operability with respect to the possibility of using non-IL-12 cytokines to treat papillomavirus-associated conditions. Stanley *et al.* do not provide sufficient guidance to suggest a reasonable expectation of success when employing immunostimulatory polypeptides other than IL-12 (*e.g.*, IL-2, IL-7, B7.1, and B7.2) to treat HPV-induced lesions. Accordingly, one of ordinary skill in the art would not be motivated to associate such immunostimulatory molecules with HPV polypeptides to provide immunity and limit the occurrence of HPV-induced cancers.

The remaining publications do not remedy the deficiencies of the Stanley *et al.* publication, since these publications likewise neither disclose or suggest the co-administration of an immunostimulatory peptide in combination with the specified papillomavirus polypeptides.

Galloway reviews various preclinical studies that have been performed with either late papillomavirus polypeptides recombinantly produced as fusion proteins (pg. 190, second col.) or individual early papillomavirus polypeptides (pg. 191, 2nd sentence to the end of 1st paragraph of 1st col.). There is no disclosure or suggestion in Galloway to combine the HPV polypeptides with a cytokine, in order to improve the anti-papilloma immune response. Quite to the contrary, Galloway reports an incomplete understanding of the relationship of papillomaviruses with the immune system, as discussed on page 191 (2nd paragraph of col. 1 through col. 2). Galloway states:

> While the vaccination studies in animal models provide encouragement, there are many questions that remain unanswered ... Whether generation of neutralizing antibodies would be sufficient to achieve sterilizing immunity or whether cell-mediated immunity will also be required for prophylactic vaccines is not clear at this time ... Yet it is unclear which component of the T-cell response should be targeted .... it is unclear whether it would be preferable to aim for the TH1 or TH2 arm.

Hines *et al.* describe a cell-mediated gene transfer referred to as "cellular adoptive transfer of stimulated cytotoxic T lymphocytes." The Hines *et al.* method involves obtaining blood lymphocytes from a cancer patient, stimulating the lymphocytes *in vitro* with a HPV peptide and IL-2, and reintroducing the *in vitro*-activated lymphocytes into the cancer patients. As discussed on page 862 of the Hines *et al.* publication, "the rationale

for this [cellular adoptive transfer of stimulated cytotoxic T lymphocytes] is that controlled *in vitro* stimulation of lymphocytes is more likely to yield effective antitumor responses compared to the response generated by the host *in vivo*."

In marked contrast, the present invention does not provide a controlled *in vitro* stimulation of lymphocytes known to be involved in the anti-tumor response, but rather relies on the local delivery of a cytokine and HPV polypeptide to induce an immune response generated by the host. Prior to the present invention, it was not known whether sufficient levels of cytokine and HPV polypeptides could be produced in situ so as to provide regression of HPV infection and HPV-induced tumors. In this regard, it was not known whether the local production of cytokine and HPV polypeptide would be adequate to properly present the HPV antigens and successfully stimulate the host's immune cells. Additionally, it was not known whether over-production of the cytokine (*e.g.*, IL-2) might cause a cytotoxic effect thereby rendering the composition of the present invention unsuitable for such applications.

Gajewski relates to B7.1 and describes its ability to co-stimulate T-lymphocytes for IL-2 production and proliferation. Using syngenic mixed lymphocyte tumor culture, it was shown that B7.1-transfected P815 tumor cells elicited P815-specific CTL activity in the presence of IL6 and IL-12 and following restimulation along with IL-2 and IL-7 (see Figure 2 and Results). On this basis, it is suggested that autologous tumor cells can be *in vitro* modified by B7.1 gene transfection to stimulate CD8+ cells upon reimplantation (bottom of pg. 470). Furthermore, Gajewski has failed to demonstrate that any B7.1-

transfected autologous tumor cells can be administered *in vivo* and achieve adequate stimulation of CD8 immune cells.

There is no disclosure or suggestion in Gajewski to combine the HPV polypeptides with a cytokine, in order to improve anti-papillomavirus immune response. Additionally lacking from the Gajewski publication is any reasonable suggestion that local delivery of a cytokine such as B7.1 along with HPV polypeptides could achieve direct stimulation of CTL response with any expectation of success, *i.e.*, to successfully provide a therapeutic effect.

Therefore, Hines *et al.* and Gajewski uniformly teach away from the presently claimed invention by describing cell-based immunotherapy. The methodology described in both publications differs substantially from the present invention because it involves *in vitro* modification of cells (*e.g.*, controlled *in vitro* stimulation of T lymphocytes as described by Hines *et al.* and B7.1-transfected tumor cells as described by Gajewski) followed by reimplantation in the host, rather than relying on local delivery of an immunostimulatory molecule along with HPV polypeptides to boost the host's immune system.

To establish a *prima facie* case of obviousness, there must be motivation to combine the references to arrive at the present invention. Applicants respectfully submit that there is no motivation to combine the disclosures of Stanley with that of Hines *et al.* or Gajewski. The Examiner asserts on page 11 of the Official Action that one of ordinary skill in the art would have been motivated to administer a cytokine (*i.e.*, IL-2) with the HPV polypeptides of Stanley *et al.* or Galloway to directly stimulate a patient's cytotoxic

cells and eliminate the possibility of contamination by re-introducing cells stimulated *in vitro* in the method of Hines *et al.* Applicants respectfully disagree with this characterization.

As discussed above, the technological disclosure of Stanley *et al.* is limited to the use of IL-12 in combination with one or more papillomavirus polypeptides (more than 80 possible combinations) for treating HPV-induced conditions. There is no disclosure or suggestion in the Stanley *et al.* publication to combine HPV-polypeptides with non-IL-12 cytokines. On the contrary, Stanley *et al.* experimentally demonstrate that non-IL-12 cytokines are not associated with regressing HPV-induced tumors. Accordingly, the Examiner's assertion that the disclosure of Stanley *et al.* further establishes the critical factor of administering a cytokine for treating papillomavirus does not come from the cited publications. At best, it is speculation on the part of the Examiner. On the other hand, the Hines *et al.* and Gajewski publications rely on *in vitro* stimulation of cells and lacks any reasonable suggestion that local delivery of cytokines along with HPV polypeptides could achieve successful stimulation of the appropriate immune cells, especially in view of the incomplete understanding of HPV-mediated immune responses, as expressed by Galloway. Thus, there was no reasonable basis for one skilled in the art to expect success in practicing the claimed composition.

Accordingly, at least because there is no motivation to combine the cited publications and because there is no reasonable expectation of success, Applicants respectfully assert that the present invention is not obvious over the combination of publications cited. Withdrawal of this rejection is respectfully requested.

B. Claims 80, 81, 83-85, 92-97, 109, 113, and 114 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Stanley *et al.*, Galloway, Hines *et al.*, Gajewski in further view of Crook *et al.* (*Cell* 67:547-556 (1991)) and Munger *et al.* (*EMBO J.* 8:4099-4105 (1989)). The Examiner argues that Crook *et al.* disclose non-oncogenic E6 variants having amino acid deletions of residues 111-115 and that Munger *et al.* disclose that amino acid residues surrounding the cysteine residue in position 24 are involved in interaction with retinoblastoma tumor suppressor gene product. This rejection, to the extent it applies to the claims as amended, is respectfully traversed.

Applicants respectfully submit that they have adequately demonstrated above the non-obviousness of the independent claims, from which the rejected claims depend, in light of the remarks above concerning the 35 U.S.C. §§ 102 and 103 rejections. The Examiner appears to rely on the Crook *et al.* and Munger *et al.* publications only for providing motivation for specific E6 and E7 variants in the composition. Nothing in the Examiner's argument concerning the Crook *et al.* and the Munger *et al.* publications remedies the deficiencies of the other publications. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusions

From the foregoing, further and favorable action in the form of a Notice of Allowance is respectfully requested and such action is earnestly solicited.

In the event that there are any questions concerning this amendment or the application in general, the Examiner is respectfully requested to telephone the undersigned so that prosecution of the application may be expedited.

Respectfully submitted,

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Date: October 28, 2002

Attachment to REPLY & AMENDMENT dated November 5, 2002

Marked-up Claims 79, 80, 82, 83, 85, 88, 89, 91, 92, 94, 95, 97, 104, 105, 107-109, and 116-120

79. (Amended) A pharmaceutical composition [intended] for the treatment or prevention of a papillomavirus infection or tumor, [which comprises as therapeutic agents] consisting essentially of a combination of early and late papillomavirus polypeptides consisting of a polypeptide from the E6 region of a papillomavirus, a polypeptide from the E7 region of a papillomavirus, a polypeptide from the Ll region of a papillomavirus and a polypeptide from the L2 region of a papillomavirus.

80. (Amended) The pharmaceutical composition according to claim 79, wherein the polypeptide from the early E6 region is a nononcogenic variant of the native E6 protein of a papillomavirus having amino acids 111-115 deleted as compared to said native E6 protein.

82. (Amended) The pharmaceutical composition according to claim [81] 80, wherein said human papillomavirus is HPV-16.

83. (Amended) The pharmaceutical composition according to claim 79, wherein the polypeptide from the early E7 region is a nononcogenic variant of the native E7 protein of a papillomavirus having amino acids 21-26 deleted as compared to said native E7 protein.

Attachment to REPLY & AMENDMENT dated November 5, 2002

Marked-up Claims 79, 80, 82, 83, 85, 88, 89, 91, 92, 94, 95, 97, 104, 105, 107-109, and 116-120

85. (Amended) The pharmaceutical composition according to claim [84] 83, wherein said human papillomavirus is HPV-16.

88. (Amended) The pharmaceutical composition of claim 79, comprising a pharmaceutically acceptable carrier [allowing] for administration of said composition by injection into humans or into animals.

89. (Amended) A method for the treatment or prevention of dysplasia or cancer of the neck of the uterus caused by a papillomavirus, comprising administering an effective amount of the pharmaceutical composition of claim 79, to a patient in need of such treatment.

91. (Amended) A pharmaceutical composition [intended] for the treatment or prevention of a papillomavirus infection or tumor, [which comprises as therapeutic agents] consisting essentially of a combination of early and late papillomavirus polypeptides consisting of a polypeptide from the E6 region of a papillomavirus, a polypeptide from the E7 region of a papillomavirus, a polypeptide from the Ll region of a papillomavirus and a polypeptide from the L2 region of a papillomavirus and at least one polypeptide having an immunostimulatory activity selected from the group consisting of interleukin-2, interleukin-7, the co-adhesion molecule B7.1 and the co-adhesion molecule B7.2.

Attachment to REPLY & AMENDMENT dated November 5, 2002

Marked-up Claims 79, 80, 82, 83, 85, 88, 89, 91, 92, 94, 95, 97, 104, 105, 107-109, and 116-120

92. (Amended) The pharmaceutical composition according to claim 91, wherein the polypeptide from the early E6 region is a nononcogenic variant of the native E6 protein of a papillomavirus having amino acids 111-115 deleted as compared to native E6 protein.

94. (Amended) The pharmaceutical composition according to claim [93] 92, wherein said human papillomavirus is HPV-16.

95. (Amended) The pharmaceutical composition according to claim 91, wherein the polypeptide from the early E7 region is a nononcogenic variant of the native E7 protein of a papillomavirus having amino acids 21-26 deleted as compared to said native E7 protein.

97. (Amended) The pharmaceutical composition according to claim [96] 95, wherein said human papillomavirus is HPV-16.

104. (Amended) The pharmaceutical composition according to claim 91, comprising a pharmaceutically acceptable carrier [allowing] for administration of said composition by injection into humans or into animals.

Attachment to REPLY & AMENDMENT dated November 5, 2002

Marked-up Claims 79, 80, 82, 83, 85, 88, 89, 91, 92, 94, 95, 97, 104, 105, 107-109, and 116-120

105. (Amended) A method for the treatment or prevention of dysplasia or cancer of the neck of the uterus caused by a papillomavirus, comprising administering an effective amount of the pharmaceutical composition according to claim 91, to a patient in need of such treatment.

107. (Amended) A method for the treatment or prevention of dysplasia or cancer of the neck of the uterus caused by a papillomavirus, comprising administering an effective amount of the pharmaceutical composition according to claim 101, to a patient in need of such treatment.

108. (Amended) A pharmaceutical composition [intended] for the treatment [or prevention] of a papillomavirus infection or tumor, [which comprises as therapeutic agents,] consisting essentially of a combination of polypeptides from the early region of a papillomavirus and at least one polypeptide having an immunostimulatory activity, wherein said combination of polypeptides from the early region of a papillomavirus consists in the E6 and the E7 polypeptides and wherein said polypeptide having an immunostimulatory activity is selected from the group consisting of interleukin-2, interleukin-7, the co-adhesion molecule B7.1 and the co-adhesion molecule B7.2.

Attachment to REPLY & AMENDMENT dated November 5, 2002

Marked-up Claims 79, 80, 82, 83, 85, 88, 89, 91, 92, 94, 95, 97, 104, 105, 107-109, and 116-120

109. (Amended) The pharmaceutical composition according to claim 108, wherein the polypeptide from the early region of a papillomavirus is a nononcogenic variant of the native E6 protein of a papillomavirus having amino acids 111-115 deleted as compared to said native E6 protein and/or a nononcogenic variant of the native E7 protein of a papillomavirus having amino acids 21-26 deleted as compared to said native E7 protein.

116. (Amended) The pharmaceutical composition of claim 108, comprising a pharmaceutically acceptable carrier [allowing] for administration of said composition by injection into humans or into animals.

117. (Amended) A method for the treatment [or prevention] of dysplasia or cancer of the neck of the uterus caused by a papillomavirus, comprising administering an effective amount of the pharmaceutical composition according to claim 108, to a patient in need of such treatment.

118. (Amended) A method for the treatment [or prevention] of dysplasia or cancer of the neck of the uterus caused by a papillomavirus, comprising administering an effective amount of the pharmaceutical composition according to claim 113, to a patient in need of such treatment.

Attachment to REPLY & AMENDMENT dated November 5, 2002

Marked-up Claims 79, 80, 82, 83, 85, 88, 89, 91, 92, 94, 95, 97, 104, 105, 107-109, and 116-120

119. (Amended) A method for the treatment [or prevention] of a papillomavirus infection, comprising administering an effective amount of the pharmaceutical composition according to claim 108, to a patient in need of such treatment.

120. (Amended) A method for the treatment [or prevention] of a papillomavirus infection, comprising administering an effective amount of the pharmaceutical composition according to claim 113, to a patient in need of such treatment.